



2SA1474/2SC3780

Ultrahigh-Definition CRT Display Video Output Applications

Applications

- Video Output.
- Color TV chroma output.
- Wide-band amp.

Features

- High f_T (f_T typ=800MHz).
- Small reverse transfer capacitance and excellent high frequency characteristic
: C_{re} =3.0pF (NPN), 4.7pF (PNP).
- Complementary PNP and NPN types.
- Adoption of FBET process.

() : 2SA1474

Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)80	V
Collector-to-Emitter Voltage	V_{CEO}		(-)60	V
Emitter-to-Base Voltage	V_{EBO}		(-)4	V
Collector Current	I_C		(-)800	mA
Peak Collector Current	I_{CP}		(-)1	A
Collector Dissipation	P_C	$T_c=50^\circ\text{C}$	1.5	W
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)60\text{V}$, $I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)2\text{V}$, $I_C=0$			(-)1.0	μA
DC Current Gain	h_{FE1}	$V_{CE}=(-)10\text{V}$, $I_C=(-)50\text{mA}$	40*		320*	
	h_{FE2}	$V_{CE}=(-)10\text{V}$, $I_C=(-)400\text{mA}$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10\text{V}$, $I_C=(-)100\text{mA}$		800		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)100\text{mA}$, $I_B=(-)10\text{mA}$			0.6	V
					(-)0.8	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)100\text{mA}$, $I_B=(-)10\text{mA}$			(-)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu\text{A}$, $I_E=0$	(-)80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1\text{mA}$, $R_{BE}=\infty$	(-)60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)100\mu\text{A}$, $I_C=0$	(-)4			V
Output Capacitance	C_{ob}	$V_{CB}=(-)30\text{V}$, $f=1\text{MHz}$		3.5		pF
				(5.3)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)30\text{V}$, $f=1\text{MHz}$		3.0		pF
				(4.7)		pF

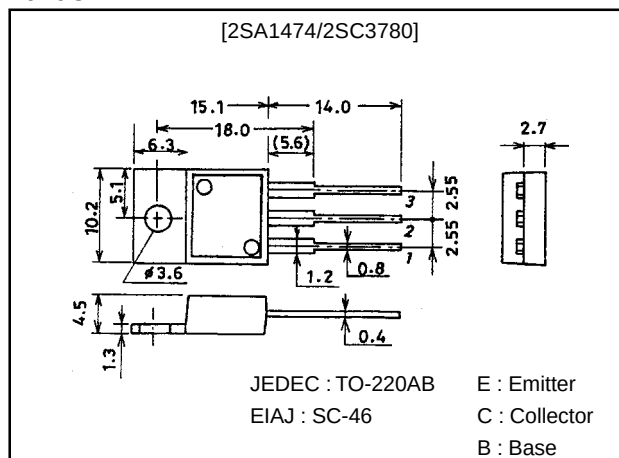
*: The 2SA1474/2SC3780 are classified by 50mA h_{FE} as follows :

40	C	80	60	D	120	100	E	200	160	F	320
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Package Dimensions

unit:mm

2010C

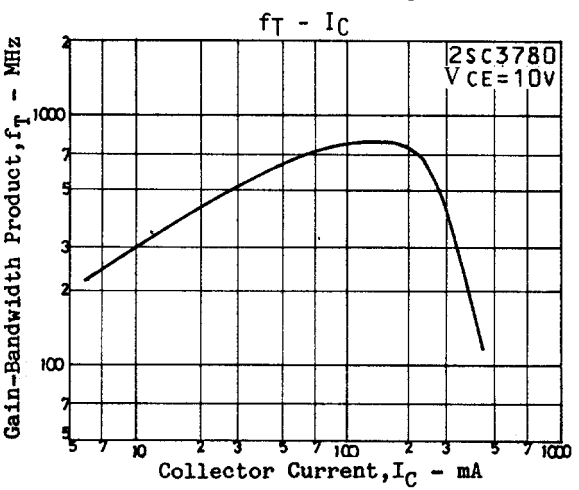
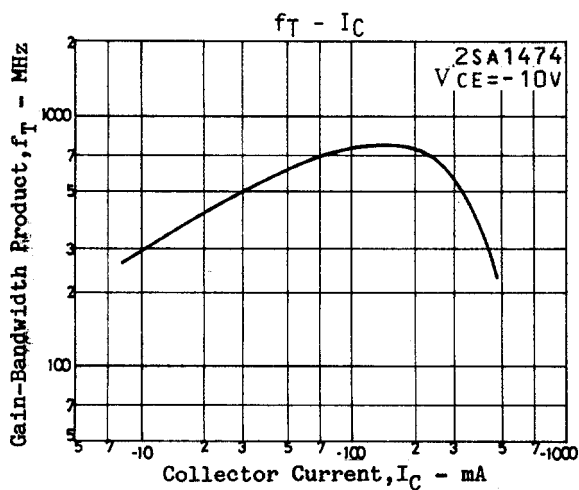
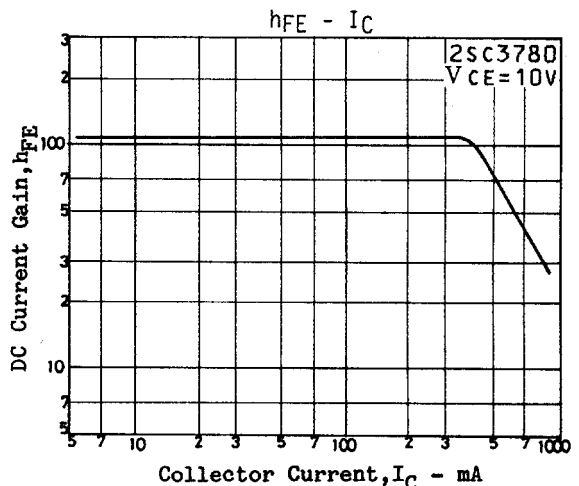
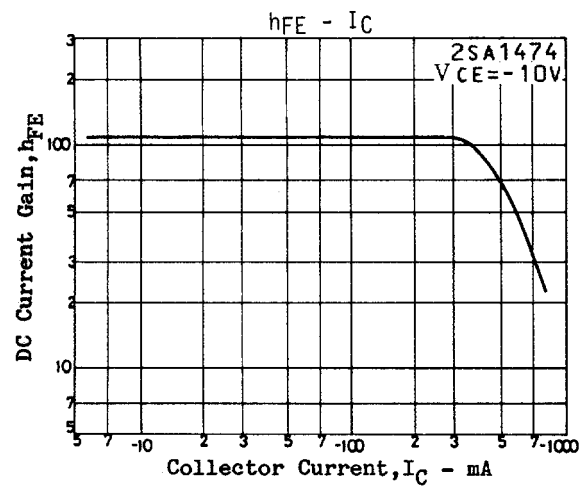
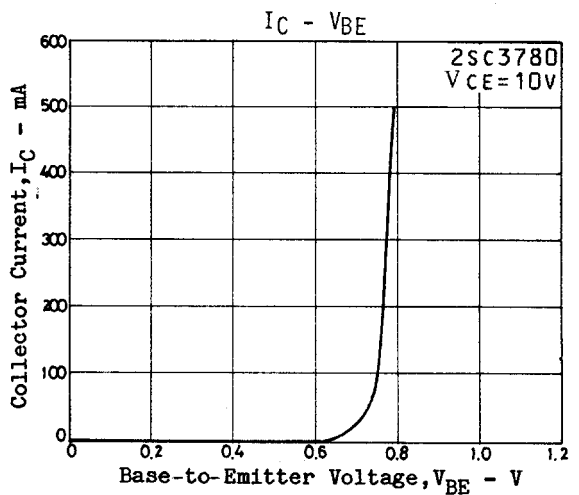
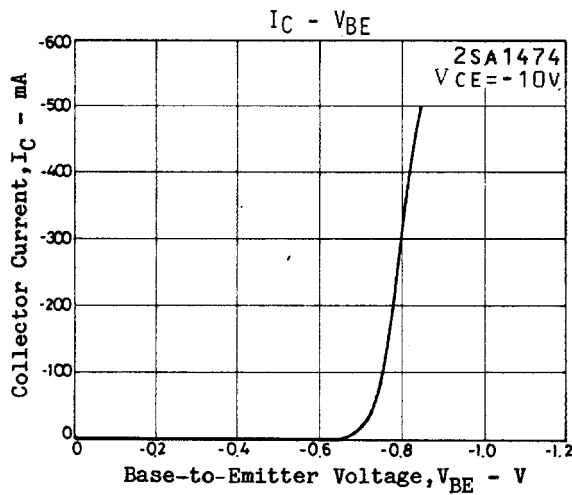
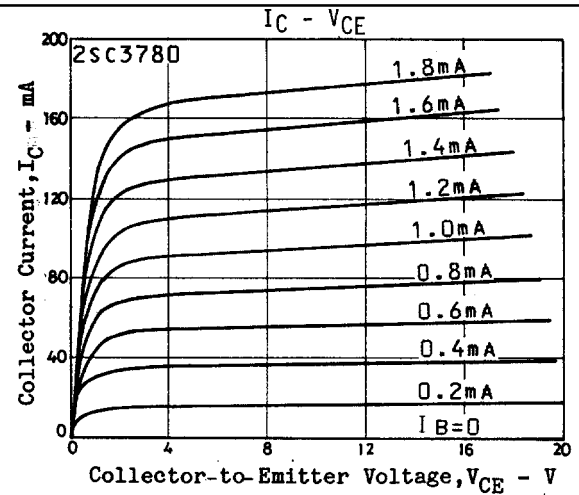
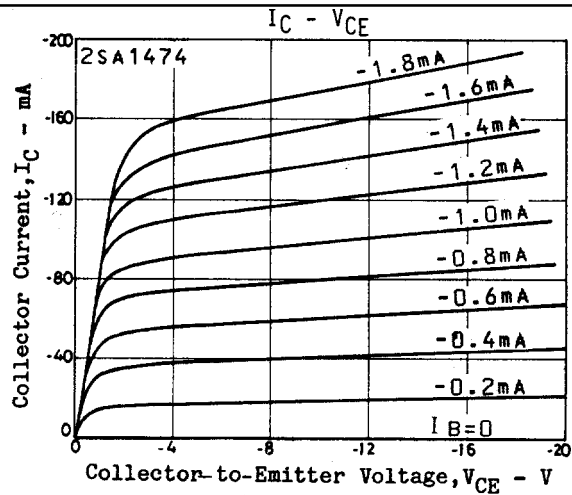


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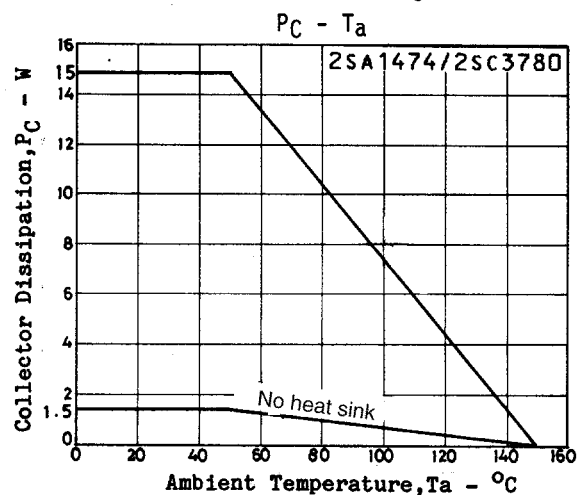
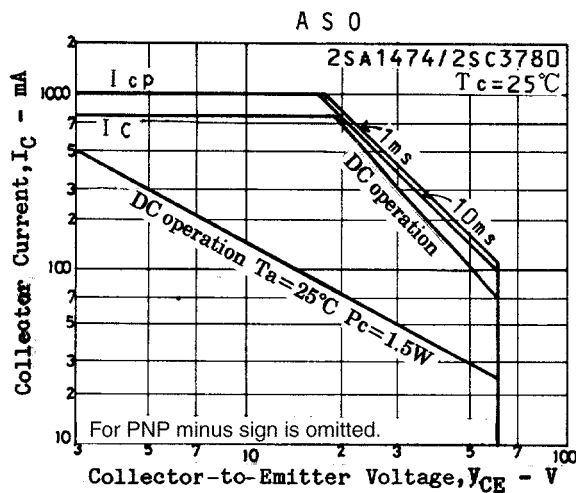
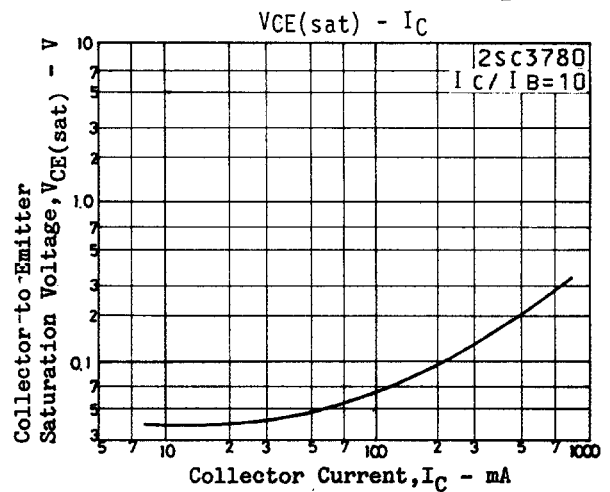
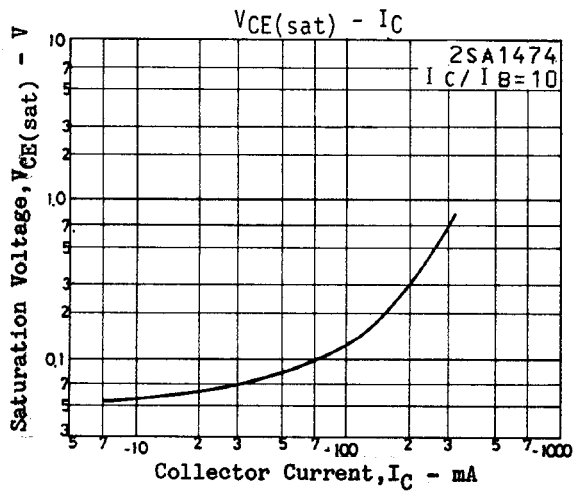
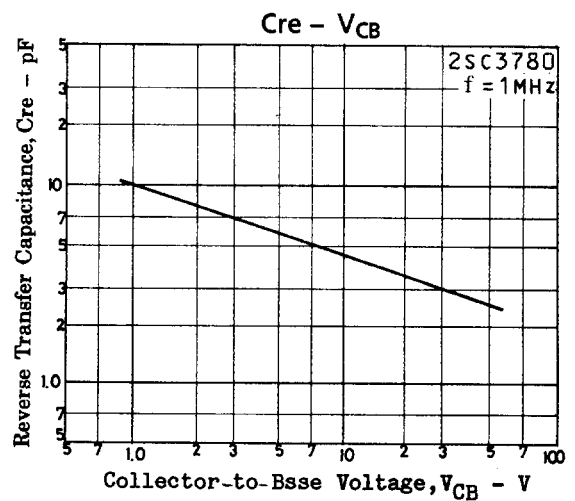
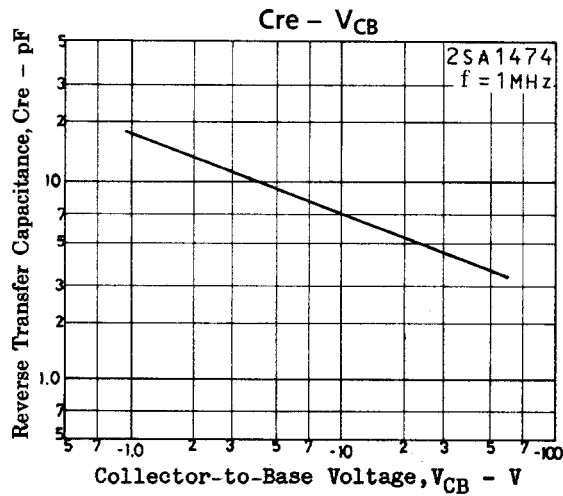
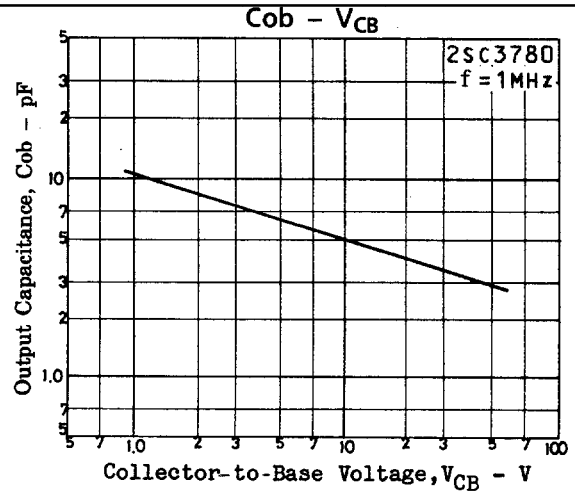
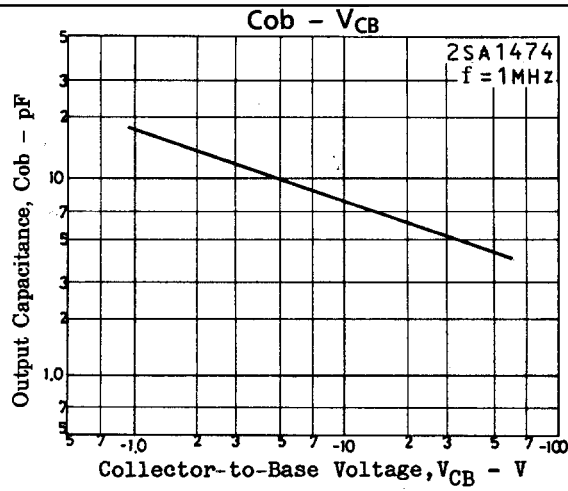
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